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ABSTRACT

Beginning in May 1987, a committee formed by the Connecticut Association for Supervision and Curriculum Development met regularly for over a year to identify and analyze the important trends in U.S. society that are projected to occur by the start of the 21st century. From the analysis, the committee selected and organized 10 trends that the members thought would most affect education in Connecticut and the nation; the trends are presented in this document. For each trend, a background summary and projections for its future are included. Additionally, the impact that each may have on the school curriculum and the curriculum delivery are discussed. Among the predicted trends are the following: (1) technology will become even more powerful, convenient, and complex; (2) the world will continue to become more globally interdependent; (3) U.S. society will continue to demand an even more convenient lifestyle, expecting all institutions to deliver their services with ease and speed; (4) alternatives to public education will continue to grow in popularity and to gain public support; and (5) a shortage of qualified teachers and administrators will necessitate alternative approaches to training, recruiting, and certifying professional educators. Additional sources for trend followup are provided. (KM)

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Curriculum for the New Millennium:

Trends Shaping Our Schools

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CONNECTICUT

ASSOCIATION FOR SUPERVISION

AND CURRICULUM DEVELOPMENT

CURRICULUM FOR THE NEW MILLENNIUM:

TRENDS SHAPING OUR SCHOOLS

Report of the 1987-1988 Study Committee

Fall 1988

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INTRODUCTION

Constant, rapid change has become the norm in contemporary America. All of the institutions of our society have been impacted by such change and are reshaping themselves to the new needs of society that are evolving.

American education is one such institution. The call for the reformation of American schools that began with the publication of **"A Nation at Risk"** is indicative of the change that continues to buffet American education. If today's educators are to lead this reformation, they must constantly scan their environment to detect and understand the changes that will impact schools.

But how can we expect educators to keep up with constant, rapid change? The answer lies in giving focus to change--identifying those areas of change which are most important to education and its future.

That is the purpose of this paper.

The charge given this committee by CASCD was to identify the most important trends in our society that will continue to impact the schools in the nation in general and in Connecticut in particular. We began our work in May 1987 and met regularly for over a year to study and analyze changes projected to occur by the start of the 21st century. From this analysis, we selected and organized those trends which we thought would most impact education.

In our collective wisdom, the ten trends presented in this paper are those which we believe educators need to pay particular attention to as we move toward the new millennium. For each trend, we have presented a background summary and projections for its future. We have also presented impacts that each trend may have on the curriculum of the school and on the delivery of that curriculum.

We hope that this paper will help all educators to be proactive, rather than reactive, in responding to change. It is our belief that we educators, who are responsible for preparing children for the new millennium, must attempt to anticipate the future if we are to fulfill our mission.

If we want to predict our future, we must be prepared to create it.

THE CHANGING NATURE OF WHO WE ARE

TREND

The population which the educational system will serve will be quite different from today's population. It will be paradoxically both younger and older and more ethnic.

BACKGROUND

During the history of our nation, the demographics have shifted markedly, and schools, as a reflection of society, have changed as the makeup of society has changed. A major shift in demographics that profoundly affected American education occurred following World War II.

With the postwar baby boom, the number of children in this country grew rapidly. This led to a more youthful society and resulted in the expansion of the nation's school systems. Simultaneously, the life span of Americans increased rapidly as medical science advanced. In 1900, Americans lived to an average age of approximately 50, which by 1950 had increased to 68 years of age.

Longevity has continued to increase steadily, and today the average American lives to approximately 75. As a result, since 1983 there have been more people over age 65 than teenagers. The elderly have become a political force in this country, demanding attention to the problems faced by senior citizens. In 1986 medical care for the elderly consumed about 31% of all medical dollars spent in the United States.

Recently the under-five population has begun to grow again and is at its highest level since 1968, having grown about 9% in the last five years. Of the 3.6 million children born in 1986, we know that:

1. Twenty-four percent live at or below the poverty line.
2. One-third are non-white.
3. Eighteen percent were born out of wedlock.
4. Forty-five percent will probably be raised by a single parent sometime before they reach 18.
5. Fifty-four percent have mothers who work outside the home.
6. Twenty percent of the girls are likely to become pregnant during their teenage years.

BACKGROUND (continued)

Furthermore, two-thirds of all families have no children in school and one out of four American homes consists of a single person.

The nature of the minority population also began to change after World War II. Today the largest ethnic minority groups are Blacks (with a population of approximately 30 million) and Hispanics (with a population of approximately 20 million). However, since 1971, Asians have constituted the largest single group of immigrants to the United States.

Connecticut's minority population follows the national pattern. The student population is 21.7% minority, with the largest proportion being Black. Hispanics are the fastest growing minority population with a 90% increase between 1970 and 1980. The minority population is concentrated in the five largest cities in the state. In 1985, the minority student population in these cities was 73.4%.

PROJECTIONS

- Life expectancy will continue to increase, reaching an average of 80 years of age or more by the year 2000. Thirty-two million Americans will be over age 65, and over 5 million Americans will be 85 years old or older. By the year 2020, 17% of the population will be over 65 years of age.

- The adult segment of our society will far outnumber children and teenagers. By the year 2000, only 25% of the society will consist of children; 75% will be adults. The largest age group will be middle aged Americans, 77 million of whom were born between 1946-1964.

- Minorities will grow in numbers and at a faster rate than the rest of the population. Early in the new millennium, one in every three Americans will be Black, Hispanic, or Asian-American. By 1990 it is likely that 25% of the Connecticut school population will be comprised of minority students.

- Between now and the year 2000, the Black population will grow only slightly, from 12% to 13% of the national population.

- Hispanics will become the largest ethnic minority in the United States.

PROJECTIONS (Continued)

- The Asian-American population within the U.S. will continue to rise, making up 3-4% of the national population by the year 2000.

- Health care for the elderly is expected to run $200 billion by the year 2000. Between now and the year 2000, a new 200 bed nursing home will have to be opened each day to keep even with national demand.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- Teachers and administrators will need the training, sensitivity, and support services that are necessary to meet the needs of a culturally divergent student body to ensure that these students perform at an academically high level.

- Educators will need to rethink their delivery of English as a Second Language and/or bilingual services.

- The well educated, middle age group will demand the best schools for their children and may be willing to be generous in their support of quality in education.

- An older population, the majority of whom do not have children in school, may be less willing to be financial partners in providing quality in education for the young. Schools may have to "court" these groups to gain their support for education.

- The elderly in our society will demand a significantly larger proportion of society's resources. The demands to support Social Security and medical care for the elderly will conflict with financial needs for education.

- The heavy concentration of minorities in urban areas will increase the pressure to find innovative ways to redistrict school populations and/or to finance public education.

THE CHANGING WORKFORCE AND THE CHANGING WORKER

TREND

The world of work will be characterized by a continued shift from an industrial to an information and service workforce with technology playing a major role in almost all segments of the workforce. Tomorrow's workers will need skills and attitudes different from those of yesterday's industrial workers.

BACKGROUND

During the Agricultural Age, the vast majority of Americans worked to produce food to feed themselves and a growing populace. The workplace for the majority was the farm, and the workweek was seven days, from dawn to dusk. Supporting the agricultural workers were small groups of industrial, professional, and service workers.

With the advent of the Industrial Revolution, factory workers rapidly became the largest group of employees, and the need for managers swelled the professional ranks. The workplace was the factory, and the number of work hours gradually declined to the now traditional forty hours per week. Agricultural workers quickly declined in number, while the number of service workers increased slowly.

With the development of the computer came a sudden increase in the number of professional information workers. Today information workers represent approximately 45% of the workforce.

Because so many information workers were women, the human service sector began to grow rapidly as working women began to pay others to provide services that they had traditionally handled. Today almost 25% of the workforce provides human services.

Approximately 25% of the workforce is still industrial, but robots are already being used to increase productivity in the automotive and consumer appliance industries. They are presently being used to do undesirable jobs, particularly those that are dangerous or boring. Concurrently, membership in blue collar labor unions is declining. Meanwhile, it takes only approximately 2% of the workforce to grow the food we consume and export.

BACKGROUND (Continued)

The very nature of work is also changing. It is estimated that about 10-15% of American workers today have some flexibility in their work hours. The information and service workforce is showing that it is motivated not only by salary and benefits, but also by the need to grow personally and professionally. For example, some information industries now offer their employees a sabbatical every few years as a method for satisfying self-renewal needs.

Because the job market is changing, more companies are recognizing the need to provide workers with the opportunity to retrain and focus on new skills. Dallas County Community College has created its Business and Professional Institute to offer courses on a contract basis to local employers. Through its Statewide Technology Program, faculty members at Purdue University design on-site programs to meet local industrial needs.

PROJECTIONS

- Information workers, who will constitute over half the total workforce, will need higher level thinking skills. These skills will allow the employee to access data, evaluate its appropriateness, and combine it with other data to create a useful information product.

- Human service workers will account for about 30% of the workforce. Significant growth will occur in food preparation, leisure, and private household services. This growth will require employees with strong interpersonal skills, experience with the practical arts, and communication skills that emphasize oral communication.

- The use of robotics will become commonplace in industry, causing a significant decrease in the number of assembly line workers. Of the 15% of the workforce that will be industrial, most will need to understand technology and to possess higher level thinking skills in order to apply the new technology appropriately.

- The United States will produce more food, but it will do so with about 2% of the total workforce. Unskilled farm workers will be replaced by new technology. Tomorrow's agricultural worker will need to be a geneticist, economist, environmentalist, technologist, and globalist.

PROJECTIONS (Continued)

- In Connecticut projections suggest that manufacturing will decline but remain a significant force. A 45% projected rate of growth in producer, professional, and financial services will increase the number of available jobs by 15%; however, projections show that the labor force will grow by only 10%.

- More people will have the option of working in their homes for major corporations, while they stay in close contact with the corporation through interactive video. More flexible workplaces will allow the employment of workers with special home needs, such as young children or elderly parents, and those with handicaps.

- The strength of transitional labor unions will decrease as the number of industrial workers decreases.

- A new work ethic will evolve which will be characterized by workers' desire for autonomy and the opportunity to be creative, independent, and self-sufficient.

- Traditional incentives will no longer be effective with the majority of the workers. In lieu of a uniform benefit package, employees will seek a "cafeteria" plan that offers a wider menu of benefit options.

- Empowerment activities will grow as more companies involve their workers in decision making and in ownership of the company itself.

- As a result of the changing job market, most workers will experience significant job changes four or five times during their working lives. Many companies will provide opportunities for employee reeducation.

- Women will constitute almost one-half of the workforce.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- The changing job market in Connecticut and the nation in general will require that a significant portion of the labor force be more highly educated than ever.

- Process and interpersonal skills will be more important than amassing large amounts of data. Therefore, the methods of instruction and the methods of assessing student learning will need to be rethought.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY (Continued)

- Students who will be information workers will need higher level thinking skills so that they will be able to synthesize information and to communicate their results clearly and succinctly. Technical or corporate writing style will need to be introduced in secondary schools.

- Technological literacy will be necessary for all students since high technology will be part of almost all jobs.

- Because the job market will continue to change, schools will need to equip students with skills that are transferable from one job to another. Students will need to be adaptable and flexible in their career development. They will need to be prepared to take responsibility for their own professional growth and to seek out appropriate opportunities for their development.

- As the demand for adult retraining increases, the public schools may be asked to take on this major responsibility. This training will probably occur in the late afternoon and evening when classrooms are virtually unused. Such programs could become a new source of revenues for schools.

- The teacher unions will refocus their energies on policy issues such as curriculum, materials, and teaching methodology.

TECHNOLOGICAL ENVIRONMENT

TREND

Technology will become even more powerful, convenient, and complex.

BACKGROUND

For many years, books were the only technology that influenced education significantly. With the evolution of a technological workplace, with its assembly line and mass production, the delivery of the curriculum was affected dramatically. Schools adopted the rote, repetitive work mode of the factory as its model.

Technological support for the teacher soon followed in the form of record players, tape recorders, ditto machines, and filmstrip and movie projectors. This support had a marked effect on teaching, but the teacher and the textbook were still the central focus of the classroom.

The technology revolution really began to affect schools with the advent of the computer. At first the computer was used as an administrative tool, changing the way schools were scheduled and the way records were kept. Then the computer moved into the curriculum, first as a new subject, then as a literacy focus, and finally as a learning tool that crosses and integrates disciplines.

Today, personal computers are commonly found in the school and often in the homes of students as well. Software packages are used to reinforce basic skills and to supplement the curriculum. Data bases are increasingly available in school libraries as information sources.

The impact of technology on the school continues to spread. Information, the raw material of education, continues to burgeon as computers become more powerful and faster. Computers have begun to change the nature of work and thus the skill needs of the workforce. An ever increasing number of Americans work with their minds instead of their hands, as computer-run robots handle more of the assembly line tasks. Also, telecommunication and fiber optic technologies have accelerated the need for a more global perspective in the curriculum.

PROJECTIONS

- Because of artificial intelligence and neural networking computers, information will double every 2-3 years.
- Data bases will become more common and more readily available, providing instant access to more facts than any person can obsorb or process meaningfully.
- Telecommunications will result in the instant global communication of both print and visual media.
- Voice activated keyboards will become common in the workplace.
- Interactive video will decrease in cost and become readily available as a teaching tool.
- Improved word processors will render handwritten communication all but obsolete.
- Robotics will become more common in the workplace and will be introduced into the home.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- Educators will find it increasingly more difficult, yet more important, to stay current in their field and to decide what information is worth knowing and necessary.
- The ability to access the appropriate information will become more important than having the information stored in the human memory.
- Voice activation will require a new emphasis on speaking skills.
- Technology will reduce the need for teachers to dispense information. Teaching techniques will need reshaping as the lecture all but disappears.
- Educators will have to reconsider the amount of time spent on teaching handwriting in elementary schools and on keyboarding in secondary schools.
- The receptive skills of listening and viewing will need more emphasis while time spent on teaching spelling, mechanics, and grammar will decrease. Mathematics curricula will de-emphasize computation.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY (Continued)

- The growth of technology will force schools to reconsider their role as vocational educators. They will also be forced to decide whether to continue to produce job-ready workers or workers with generic workplace skills.

- The need for technology will require massive amounts of money for equipment, yet may be more economical than the current delivery system.

- Schools will need to develop a strong partnership with business and industry to provide access to technology that tax supported budgets will not allow.

- Telecommunications will permit extensive sharing of resources between and among schools around the country. This will allow for an expansion of course offerings.

- Telecommunications and interactive video will alter the relationship between home and school, allowing for more effective homebound instruction and encouraging the home-school movement.

- Computers will play a more active role in drill and practice, thereby freeing teachers for other instructional practices.

- Computers and interactive video will replace printed material as the major vehicle for instruction.

GLOBALIZATION

TREND

The world will continue to become more globally interdependent.

BACKGROUND

Globalization was not a major educational issue during the Age of Agriculture because what occurred in other parts of the world had little impact on the average citizen. Food was grown for local consumption, and most of the goods that were produced were used in this country.

With the coming of the Industrial Revolution, a global economy began to form. Goods were produced not only for local use, but also for trade. The emerging global economy and two world wars led to the realization that what occurred in remote corners of the world could affect us in the United States.

Globalization increased markedly with the advent of jet air travel. The world grew smaller because we could literally reach all corners of our globe in a matter of hours. But globalization was becoming a pervasive concern of society as a result of the movement toward the global village of instant communication. Satellites and fiber optics have made possible the sharing of information, even visual information, instantaneously.

The global flow of information has made certain languages (e.g., English, Chinese, and Spanish) more international. English has become the language of the world's business class, and as a result, Japanese children routinely learn English as a second language. Eurovision, the European Television Network, now makes television programs available in four languages in eleven countries. Increasingly, the educated person who can cooperate and compete with others on their own turf needs to be bi- or multi-lingual.

More people from different parts of the globe are eating the same foods, wearing the same clothes, and enjoying the same music, movies, magazines, and even televised soap operas. Presently, 7-11 stores can be found in Japan and Pizza Huts in Russia. Even smaller companies like Volpi Italian Foods of St. Louis and Petrofsky's Bakery Goods deliver their goods, from proscuitto ham to bagels, to places like Singapore and Hong Kong. A leading department store in France, Au Printemps, will soon open a store in Denver.

BACKGROUND (Continued)

Clearly, the economies of most of the world's nations have become interwoven. This is as true for banking, for monetary exchange and markets, and for stocks and bonds as it is for manufacturing. Many Americans first became acquainted with this growing economic reality in October 1987. They discovered that their retirement plans, college tuition nest eggs, and dreams of a vacation were tied to events on worldwide stock exchanges and money markets including those in Tokyo, London, and Hong Kong.

Today the Ford Escort contains parts made in six countries, and many Chrysler engines are made by the Japanese firm Mitsubishi, 25% of which is owned by Chrysler. Over 300 foreign stocks are now traded on the New York Stock Exchange, and Japanese firms like Hitachi and Nomura Securities are now members of the New York Stock Exchange. A toll-free international telephone service links the United States and nine European countries.

Truly, our world continues to shrink, and thinking globally has already become a mark of the Age of Information.

PROJECTIONS

- The economic system of the United States will be more intricately linked to the economic systems of the rest of the world.
- American markets will rely on global sales for a much larger share of their success.
- Global businesses will continue to move into the American market.
- Communication between countries will grow in speed and quantity.
- Language will become more international. Knowing more than one language will be the mark of an educated person.
- Lifestyle characteristics, which transcend political boundaries, will become more common around the world.
- With the completion of a transoceanic, fiber optic communication cable, intercontinental communication will become easier and more rapid.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- The number of foreign languages taught will need to be expanded. In Connecticut only 44% of high school students study a language other than English. Of these, almost 84% study French or Spanish and usually for only two or three years. Only six districts offer Russian; only three offer Chinese. Nowhere in Connecticut can a public school student study Japanese.

- The study of foreign languages should begin earlier, at least in middle school and most likely in elementary school.

- The emphasis in foreign language teaching may have to be shifted from grammar to comprehension of the spoken word.

- Connecticut's schools will need to rethink their instruction in world history, culture, and geography. While every Connecticut student studies U.S. History in elementary, junior high, and high school, only about one-half take World History and Civilization. Only about 2% take a geography course of at least one semester in length. The classical curriculum which focuses on the history and culture of only Western civilization will need to be rethought.

- The literature read in English classes should be expanded to include more selections that were not originally written in English. World literature representing South America, Africa, and Asia as well as Europe will need to be considered as a requirement.

- A curriculum focused more globally may require a restructuring of the way the curriculum is organized and delivered. An interdisciplinary, topical approach to learning about world cultures, where the connections between ideas, actions, and discoveries are emphasized, may be the most effective way to globalize the curriculum.

- If students need to become more aware of the events of their world, a global issues study may need to be incorporated into the curriculum.

THE CHANGING FAMILY

TREND

The American family will continue to be an institution of options and variations. No single family type will represent the majority of Americans.

BACKGROUND

Few aspects of society have changed faster than the way we live together. In the 19th century and early 20th century in America and Western Europe, it was assumed that the husband would be the breadwinner and the head of the family, while the wife cared for the home and the children. A considerable portion of the social legislation and economic policy that we operate under today was written at that time.

During the second half of the 20th century in the United States, we have witnessed tremendous changes in the American family. The traditional family where father worked and mother stayed at home to take care of the children represents only about 4% of American families today. The extended family of parents, grandparents, aunts and uncles, and other relatives living close enough to one another to help with the rearing of the children is for most families largely a thing of the past.

In recent years the family has become more fragmented as women have entered the workforce, as divorce rates have skyrocketed, and as cohabitation has become an alternative life style. Fewer children have a parent at home who is a full-time partner in the educational process. Presently about 68% of all mothers with school age children are employed, and about half of all mothers with children under the age of six are employed. However, the United States is the only industrialized country in the world without a national child care policy.

There is every reason to believe that the American family will continue to change. Although the divorce rate seems to be stabilizing at roughly one in every two new marriages, its impact remains. At the present time, one out of every three children experiences a single parent home during the formative years. In 1986, 2.3 million single women, representing about 7% of all mothers, had children under the age of 18. In 1987 divorced and never-married single persons outnumbered people who were married, and the number of couples without children outnumbered those who have children.

PROJECTIONS

- Married couples will make up approximately 50% of all households in the United States by the year 2000, the lowest percentage ever.
- In the vast majority of families where both parents are present, both parents will be working.
- The traditional family of two parents and children will make up about one-third of American families. Step families and single parent families will make up the other two-thirds of families.
- The percentage of American homes with school age children will continue to decrease.
- An increasing number of never-married women will become mothers.
- By the year 2000, over 80% of women ages 20-24 will be working or seeking work.
- The number of women with school age children who are employed outside the home will continue to grow.
- Demand for day care will continue to grow, although the majority of children will still be cared for by a parent after school.
- Contact time between parents and children will continue to decrease as the two income family grows. The traditional family seated around the dinner table in conversation will be the exception rather than the rule.
- The majority of school age children will spend a portion of their school years in a single parent home.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- Responsibility for the education of children may lie even more with the school and less with the parents.
- The majority of parents will not be active partners in the educational process. Staff development will be needed to help teachers deal with all varieties of parenthood and family pressures on children.
- Family Life Education may have to be expanded beyond sex, drug, and alcohol education to include more education about child development and parenting.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY (Continued)

- The current definition of homework may have to be rethought because a student may well not have a parent at home to see that the homework is done or to help when the student has questions about the assignment. Homework "hot lines" may be needed so that students can have adult help.

- Teaching "proper behavior" and acceptable discipline will have to become a part of the curriculum.

- The school will have to expand the curriculum to include before school and after school programs for children whose parents cannot be home to provide supervision and care.

- The demand may increase to expand the school to include three and/or four year olds.

- Conferences with parents will have to be scheduled flexibly to include nights and weekend meetings. Teachers may have to make home visits.

- Public support for education will decrease as the percentage of homes with school age children decreases.

- Parent/teacher organizations will have to be reorganized to reflect the two-income family and the single parent family.

THE AGE OF CONVENIENCE

TREND

Our society will continue to demand an even more convenient lifestyle, expecting all institutions to deliver their services with ease and speed.

BACKGROUND

During the Age of Agriculture, the institutions of society served that society in accordance with its wishes. Schools, for example, were scheduled to be compatible with the farm and its needs. Children attended school only when they could be spared as workers. Even doctors most often delivered their services to the home so that work on the farm would be interrupted as little as possible.

When we moved into the Industrial Age and an assembly line mind-set, institutions became constant in their format. The number of school days was set and a standard curriculum established for all children. Medical treatment became office or hospital centered and the house call rapidly became an anachronism. Stores and banks set hours of operation that were modeled after the factory but not necessarily responsive to the needs of the factory worker.

Today, we are experiencing the "7-11 phenomenon," an age in which institutions are expected to serve the needs of society not only well, but also conveniently. From small convenience stores which meet our immediate needs to supergrocery stores where we can purchase a seemingly infinite variety of goods in a seemingly infinite variety of sizes and shapes, we expect services to be available when and where we want them. We expect to be able to bank during the evening hours and on Saturdays, and with automated tellers, we get what we want when we want it.

Such convenience requires large numbers of workers, and as a result, the number of teenage workers has risen dramatically. The state of Connecticut, for example, recently lowered the legal working age to 15 in response to the shortage of human service workers.

PROJECTIONS

- Service institutions will be more responsive to the needs and desires of consumers. The delivery of services will be adjusted to meet the schedules of consumers, coming to consumers rather than expecting consumers to travel to the service.

- Human services will be available for more hours each day. Teenagers will be encouraged to join the workforce at an earlier age and/or to work longer hours.

- Telecommunications will lead to major growth in the use of television as a source of convenient services, including shopping, accessing information, and being educated.

- Workers will demand more flexibility in their work day in order to meet their personal needs. Flextime, permanent part-time work, and job sharing will become common variations to the traditional work day and work week.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- School schedules will need to be reexamined in light of society's demands for convenience. Parents will expect that schools accommodate their personal calendars, and the year-round school may grow in popularity.

- As service industries stay open longer hours, schools will be encouraged to be more flexible in their hours. This will free teenagers to work at times other than after school and evenings.

- As more adults need retraining, they will demand that such retraining be convenient. Schools will be a logical location for adult retraining/reeducation programs.

- As more teenagers are employed, the role of homework in the educational process may need to be rethought. The battle will increase between the demands of a workforce based on convenience and a teaching expectation that stresses homework.

- The convenience factor will increase the pressure on teenagers, since they are the backbone of the workforce that make this convenience possible.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY (Continued)

- The current model of after-school activities will need to be modified to be more convenient at the high school level.
- The need for a longer school day may require the incorporation of after-school activities into the lower grades.
- The demands for convenience may come in conflict with the commitment of educators to provide all students with a quality education.

TOMORROW'S EDUCATORS

CHANGING ISSUES OF SUPPLY AND DEMAND

TREND

A shortage of qualified teachers and administrators will necessitate alternative approaches to training, recruiting, and certifying professional educators.

BACKGROUND

Until the 20th century, American schools graduated a very small percentage of the youth of this country. Book-learning was not considered important for most young Americans because they could learn what they would need on the farm from their parents and other relatives. Most students who attended school dropped out in the elementary years. Because such a small percentage of children attended school, the demand for teachers was not great. To be a teacher usually required that a person be simply a high school graduate.

As people moved away from the farms, a new school system developed that reached into every corner of the country. Laws were passed mandating attendance, thereby increasing the number of students and the demand for teachers. However, since teaching was one of the only professions open to young women, the supply of available teachers was more than sufficient. It remained so even as the requirements to teach increased from a two year, normal school degree to a four year, college degree.

With the start of the baby boom after World War II, the teaching profession grew rapidly. The demand continued to increase and the supply was not able to match the demand, resulting in a teacher shortage. The shortage began to abate in the mid-1970's, and for a period of time a surplus existed. However, the number of college students choosing teaching as a career began to decrease from 20% of college students in 1970 to less than 4% in 1983.

Recently this trend has shown signs of reversing itself, and 7.3% of college students in 1987 selected teaching as their field. This was due in part to the attention given to teachers' salaries. In 1986-87 the national average for teachers' salaries increased 5.7% over the previous year.

BACKGROUND (Continued)

A further issue of teacher supply and demand is that of minority representation. In the public schools of Connecticut, 21.7% of the K-12 students are minorities, but only 6% of the staff. The number of minority students is projected to increase rapidly, but the number of minority educators is not. Nationwide the number of minorities receiving education degrees fell by 50% between 1971 and 1985.

PROJECTIONS

- A nationwide teacher shortage will develop as the teachers who entered the job market following World War II reach retirement age. The impact of the baby echo boom will add increasing numbers of children to the elementary schools. This shortage will be felt particularly in such areas as math and science.
- Teacher salaries will continue to increase and will be close to parity (on an annual basis) with other professionals who are required to have college degrees. Similarly, administrator salaries will also increase, although not as fast as teacher salaries.
- Exams for beginning teacher certification will become the norm in the United States.
- Business, industry, and government will hold schools more accountable for the knowledge and skills needed by the labor force.
- Higher salaries and improved working conditions will continue to serve as incentives to individuals contemplating careers in education.
- The need for minority educators will become crucial, heightened by the stiff competition from the corporate world for college-educated minorities.
- Alternate routes to teacher certification will become common in the United States.
- Pay increases will be linked in part to job performance.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- The public will demand more visible accountability from the school as teacher salaries continue to increase.
- Making more effective use of teacher time will become necessary. Districts may need to decrease the amount of non-instructional responsibilities required of teachers.
- Teacher shortage will require school districts to prepare active recruitment plans and strategies.
- Competition for minority educators will be intense.
- To meet demands to improve student performance and the quantity and quality of teachers and school administrators, educators will be expected to possess a greater diversity of skills than ever before.
- Education will become more costly, and both state and local educators will have to explore alternative methods of funds for education. School and business partnerships will increase as one of these alternatives.
- As performance and salary become more closely linked, the ways in which teachers and administrators are evaluated will need to be reexamined.
- Schools will need to use technology to supplement teaching in areas of critical teacher shortages.

CHANGES IN SCHOOL LEADERSHIP

TREND

The locus of control in education will continue to shift from the federal to the state level and from the central office to the building level. The decision making within a school district will be shared more with teachers.

BACKGROUND

During the early years of our nation, schools were administered in absentia. With the teacher as the sole professional in most schools, the management usually consisted of a school board that met periodically and state officials with whom contact was rare. This management scheme was efficient because schools were small in size, number of students, and number of teachers.

With the coming of industrialism, management styles changed. As the size of the educational system grew, the complexity of administering it grew, and just as middle managers became common in industry, the building administrator became common in education. The superintendent emerged as the "boss" of the system and was aided by the middle manager principal who served as the plant manager in a school building.

As the institution continued to grow in size and complexity, additional levels of administration were created, including such people as assistant superintendents, town-wide directors, vice-principals, department heads, and curriculum coordinators. Organizational charts were necessary in order to identify the levels and responsibilities of the various managers. Teachers could easily be found on such organizational charts. They were always near or at the bottom of the hierarchy.

The industrial age administrative archetype mirrored the factory model, a top-down system of decision making. This model led to the rise of teacher unions that tried to represent the needs and concerns of the large group of workers at the bottom level of the bureaucracy.

BACKGROUND (Continued)

In recent years, the corporate world has begun to change to management styles that focus on workplace democracy and techniques such as "quality circles." Corporate management recognized the importance of involving workers and employees in making decisions, thus giving them a stake in change. Soon education began to look at its own management style, questioning the effectiveness of its current structure. Was the structure an enabling device or an obstacle? The answers to these questions suggested that it was time to change management styles in education. Currently, schools are beginning to explore shared decision making and the empowerment of teachers.

PROJECTIONS

- Education will change from primarily a top down management style based on the traditional industrial model to a shared decision making style, a model that emerged from the information industries.
- Technology will simplify and improve management by providing more efficient control of and access to information about the institution and its students.
- More autnority will be shared with teachers as such collaborative efforts as teacher empowerment and shared decision making become widespread.
- Leadership from the state will become more directive.
- Authority within the district will be decentralized, moving from the central office to the building level.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- With shared decision making, the classroom and the curriculum will become the central and immediate focus of attempts to improve schools.
- Administrative training will emphasize the use of technology, the management of change, strategic planning, and the use of research.
- As management roles become more available to teachers, differentiation in salary for these new roles may necessitate the restructuring of the single salary schedule for teachers. Career ladder concepts will gain in popularity.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY (Continued)

- Building administrators may be freed from many of the traditional tasks assigned to them, allowing them to concentrate more on curricular and instructional leadership.

- Traditional labor organizations and their negotiation strategies will have to be changed as teacher participation in the decision making of schools gains credence.

- The policy making responsibility of school boards will be narrowed as the state becomes more directive. This may lead to increased school board frustrations and thus increased pressure on superintendents.

- The superintendent's role will be increasingly that of a power broker and public relations expert.

- The bureaucracy of the state department of education will expand.

THE GROWING POPULARITY OF ALTERNATIVES TO PUBLIC EDUCATION

TREND

Alternatives to public education will continue to grow in popularity and to gain public support.

BACKGROUND

During its early years, American public education was an alternative to the education received in the home. A very small percentage of American children attended school and an even smaller percentage earned a high school diploma. For the most part, the adult members of the extended family taught children what they would need to know and value to take their place in that family and community.

Industrialization changed all that. When people moved to the cities to work in the factories, they left behind the built-in educational system of the family. A public education system was established for the masses. The most common alternatives to a public education were the private schools with their clientele of the mostly well-to-do Caucasian Americans and the parochial system which was dominated by the Roman Catholic schools. Private schools at the beginning of the Industrial Revolution accounted for approximately 8-10% of the students in school. The percentage has remained quite constant.

Recently, the issue of alternatives to public education has come to the forefront because of the Reagan administration's advocacy of voucher systems and/or tuition tax credits. In 1983 the state of Minnesota passed a tax deduction plan which permits parents to deduct expenses incurred in providing tuition, textbooks, and transportation for their children regardless of whether the children attend public or private schools. In 1988 Minnesota also passed a free choice program which permits parents to select the public school their children will attend.

Schools for profit, private schools that offer a money back guarantee to parents, have also begun to appear in parts of the country. Sylvan Learning Centers, Stanley Kaplan, Evelyn Woods, and Sears presently offer such programs in reading, math, algebra, and study skills which parallel the public school curriculum.

BACKGROUND (Continued)

The demand has increased as well for some parents to teach their children at home. This alternative has grown in part as a result of the growth of the fundamentalist church movement in the United States. Since 1987 courts have overwhelmingly supported the parents' right to provide home schooling.

PROJECTIONS

- The percentage of American students in traditional private schools should remain stable. Church affiliated private schools will remain the most common alternative to public schools.
- Fundamentalist Christian schools will increase in numbers and influence.
- The cost of private education in Connecticut will increase as private school teachers demand equity with public school teachers.
- Demands to educate children at home will increase. Parents will gain more public support for their requests to teach their children at home.
- There will be an increase in the number of states permitting voucher systems or tax benefits for the expense of sending children to private schools.
- Inter and intradistrict free choice systems may gain popularity.
- Schools for profit may evolve from their current auxiliary role into an alternative to traditional public education.
- Schools for profit will intensify the competition for the best teachers.

IMPACTS ON THE CURRICULUM AND ITS DELIVERY

- With a growing number of alternatives to the traditional school programs, public schools will be held more accountable for the results they achieve.
- Public schools will need to reexamine their curricular offerings in light of competition arising from a voucher system.
- As the competition for students increases, public schools will need to stress the benefits of a comprehensive, multicultural education.
- Public schools may need to become as flexible as their competitors in order to provide alternative schedules for students whose parents' schedules are varied.
- As competition from alternatives increases, so will the problem of providing both quality in education and racially balanced schools.

INCREASE IN ETHICAL AND VALUE QUESTIONS

TREND

The number, frequency, and complexity of ethical and value-laden questions confronting educators will increase significantly.

BACKGROUND

Education in this country, whether formal or informal, has always been concerned with transmitting social values as well as facts. During the Age of Agriculture, the home and the church assumed responsibility for the formation of values, and those values were focused on the good of the local community and the families in the community. The school merely had to reinforce the values already established at home and in church.

During the Industrial Age, issues of values and ethics began to increase in number and seriousness. The societal focus on the family and the local community began to shift to a focus on the workplace and the country.

After 1960, television and other media dramatized situations that questioned traditional ethics and values. Concurrently, the home became less active in the educational process, and a gap developed in the formation of values. Schools became involved with issues to focus overtly on values clarification. However, with a rise of conservative thought, values clarification and moral education became major controversial issues, and schools tended to avoid such controversy.

Yet moral and ethical issues continue to abound, and the increased use of high technology (including biotechnology) and its seemingly dehumanizing tendencies suggests that even more issues of values and ethics will confront society and schools in the near future.

PROJECTIONS AND IMPACTS ON THE CURRICULUM AND ITS DELIVERY

Within the preceding nine trends are a number of projections and impacts that raise serious questions of ethics and values. Among the questions that schools will have to face are:

- What is the role of the school in teaching morality and ethics?
- How can the school best reflect the ethics and values of society (national, state, and local) in the curriculum?
- Whose values and ethics in a pluralistic society should the public school teach?
- What is the school's obligation to teach conflicting values and ethics? How should this be done?
- Should educators take a leadership role on issues of ethics and morality? If so, to what degree?
- To what degree and in what ways should educators be role models?
- What are the best methodologies to use in ethics instruction?
- How does the school establish working relationships with the other sources of moral and ethical education - church, family, and social organizations?

SUGGESTED SOURCES

FOR TREND FOLLOW-UP

American Marketplace
Business Publishers, Inc.
951 Pershing Drive
Silver Spring, MD 20910-4464

Bureau of the Census
U.S. Department of Commerce News
Washington, D.C. 20230

Business Week
Post Office Box 506
Hightstown, N.J. 08520-9970

Discover
Time and Life Building
1271 Avenue of the Americas
New York, N.Y. 10020

Educational Leadership
Association for Supervision
and Curriculum Development
125 N. West Street
Alexandria, VA 22314

Education Week
Suite 560
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20036

Forbes
60 Fifth Avenue
New York, N.Y. 10011

Fortune
Time and Life Building
1271 Avenue of the Americas
New York, N.Y. 10021

The Futurist
The World Future Society
4916 St. Elmo Avenue
Bethesda, MD 20814

SUGGESTED SOURCES (Continued)

High Technology Business
P. O. Box 51488
Boulder, CO 80321-1488

"John Naisbitt's Trend Letter"
The Global Network
1101 30th St., N.W.
Suite 301
Washington, D.C. 20007

Phi Delta Kappan
P. O. Box 789
Bloomington, IN 47402

"The Public Pulse"
The Roper Organization
205 East Forty-Second Street
New York, N.Y. 10017

Technology Review
Edited at the Massachusetts Institute of Technology
P. O. Box 978
Farmingdale, N.Y. 11717-9878

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